

REMARKS

In accordance with the foregoing, claims 1 and 5 have been amended. No new matter has been presented and, accordingly, approval and entry of the foregoing is respectfully requested.

STATUS OF CLAIMS

Claims 1-9 are pending and under consideration.

Claims 1-9 are rejected.

ITEM 2: REJECTION OF CLAIMS 1-3 FOR OBVIOUSNESS UNDER 35 U.S.C. §103(a) OVER PAVIDIS (U.S. PATENT NO. 6,370,260) IN VIEW OF O'MEARA (U.S. PATENT NO. 3,544,771);

ITEM 3: REJECTION OF CLAIM 4 FOR OBVIOUSNESS UNDER 35 U.S.C. §103(a) OVER PAVIDIS (U.S. PATENT NO. 6,370,260) IN VIEW OF O'MEARA (U.S. PATENT NO. 3,544,771) AND FURTHER IN VIEW OF GAYNOR (U.S. PATENT NO. 3,434,835) ;

ITEM 4: REJECTION OF CLAIM 5-8 FOR OBVIOUSNESS UNDER 35 U.S.C. §103(a) OVER PAVIDIS ('260) IN VIEW OF OKAZAKI (U.S. PATENT NO. 6,873,713) AND O'MEARA ('771);

ITEM 5: REJECTION OF CLAIM 9 FOR OBVIOUSNESS UNDER 35 U.S.C. §103(a) OVER PAVIDIS (U.S. PATENT NO. 6,370,260), OKAZAKI ('713), O'MEARA ('771) AND GAYNOR ('835)

The rejections are respectfully traversed.

The Examiner asserts that Pavidis teaches a first image pickup step to pick up an image of an object positioned in front of a background using wavelengths in a visible light region. However, this is incorrect.

Pavidis merely proposes a near-human detector which uses two infrared cameras ("near-infrared cameras 11 and 12: col. 4, lines 23-25). Both the two cameras of Pavidis pick up images using wavelengths in the infrared region. The two cameras use different wavelengths in the infrared region in order to extract the human within a vehicle by utilizing a difference between the respective infrared absorptions of the two wavelengths with respect to water.

In addition, as acknowledged by the Examiner, Pavidis fails to teach or suggest that at least a surface of the background is formed by an organic dye. (See, claims 1 and 5, last line of each).

Pavidis fails to teach or suggest the features (i) and (ii) of the present invention, namely, (i) picking up the image of the object positioned in front of the background using wavelengths in the visible light region and picking up the image of the object positioned in front of the background using wavelengths in the infrared region; and (ii) forming at least the surface of the background formed by the organic dye.

An organic dye, depending on the kind (or type), has different colors in the visible light region, whereby it is possible to easily separate the object and the background by selecting a suitable organic dye for the background depending on the object. In addition, since the organic dye has a high absorption in the infrared region, it becomes possible to easily separate the object and the background depending on the brightness (or luminance). Hence, an important feature of the present invention is the use of the organic dye for the background, since it enables easy separation of the object and the background in both the visible and the infrared light regions.

The Examiner cites O'Meara as suggesting the use of a dye to select the background color of an information bearing medium. Simply selecting the background color of the information bearing medium is completely different from forming at least the surface of the background by the organic dye when picking up the object that is positioned in front of the background using wavelengths in the visible light region and picking up the image of this object that is positioned in front of the background using wavelengths in the infrared region. It should also be noted that even an ink which appears to be black in the visible light region may appear invisible in the infrared region, and the ink in O'Meara cannot be simply applied to the image pickup using the wavelengths in the infrared region.

There is not even a suggestion in O'Meara to form at least the surface of the background by the organic dye, in order to enable extraction of only the object based on the images picked up using the wavelengths in the visible light region and the wavelengths in the infrared region.

Neither Pavidis nor O'Meara teaches, or even suggests the above features (i) and (ii) of the present invention. Moreover, it should be noted that, when the material forming the object changes, the absorption for each wavelength changes. For this reason, it is not easy to find a background material that would enable simple separation of the object from the background when the object is picked up using wavelengths in the visible light region and, likewise, when using wavelengths in the infrared region - - i.e., using wavelengths in two different regions.

Therefore, forming at least the surface of the background by the organic dye for the purpose of extracting only the object based on the images picked up using the wavelengths in

the visible light region and the wavelengths in the infrared region, is not obvious to those skilled in the art, even in view of O'Meara.

For the foregoing reasons, it is submitted that claims 1-3 are allowable over Pavidis and O'Meara, and thus that the rejection of claims 1-3 in Item 2 of the Action is without basis and should be withdrawn.

Addressing the rejection of Item 3 of the Action, claim 4 depends from base claim 1 which has been shown in the foregoing to distinguish patentably over Pavidis and O'Meara. Gaynor is merely cited in support of the rejection of Item 3 for a teaching of organic dyes, and fails to teach or suggest the features (i) and (ii) of the present invention, described above.

Accordingly, it is submitted that claim 4 is allowable over Pavidis, O'Meara and Gaynor and that the rejection of Item 3 is without basis and should be withdrawn.

With regard to Item 5, Pavidis and O'Meara fail to teach or suggest the features (i) and (ii) of the present invention, as discussed above with respect to claim 1. Moreover, Okazaki is merely cited as teaching a matching section, and fails to teach or suggest the features (i) and (ii) of the present invention and further fails to overcome the deficiencies of the Pavidis and O'Meara combination.

Therefore, Pavidis, O'Meara and Okazaki all fail to teach or suggest the features (i) and (ii) of claim 5. It is, thus, believed that claims 5-8 patentably distinguish over Pavidis, Okazaki and O'Meara, taken singularly or in any proper combination; it follows that Item 4 fails to support the rejections of claims 5-8 and, accordingly, should be withdrawn and those claims should be allowed.

Claim 9 is dependent upon the base claim 5, which is clearly delimited over the combination of Pavidis, Okazaki and O'Meara. Gaynor is merely cited as teaching organic dyes, and fails to teach or suggest the features (i) and (ii) of the present invention, described above; moreover, Gaynor fails to overcome the deficiencies of the combination of Pavidis, Okazaki and O'Meara.

Accordingly, it is submitted that claim 9 is allowable over Pavidis, Okazaki O'Meara and Gaynor and, accordingly, the rejection of Item 5 is defective and should be withdrawn.

CONCLUSION

It is respectfully submitted that the foregoing has clearly distinguished the pending claims over the references and rejections of record. Further, all outstanding objections have been overcome by the foregoing. There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

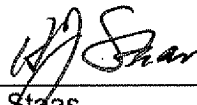
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: April 2, 2007

By: 
H. J. Staas
Registration No. 22,010

1201 New York Avenue, NW, 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501